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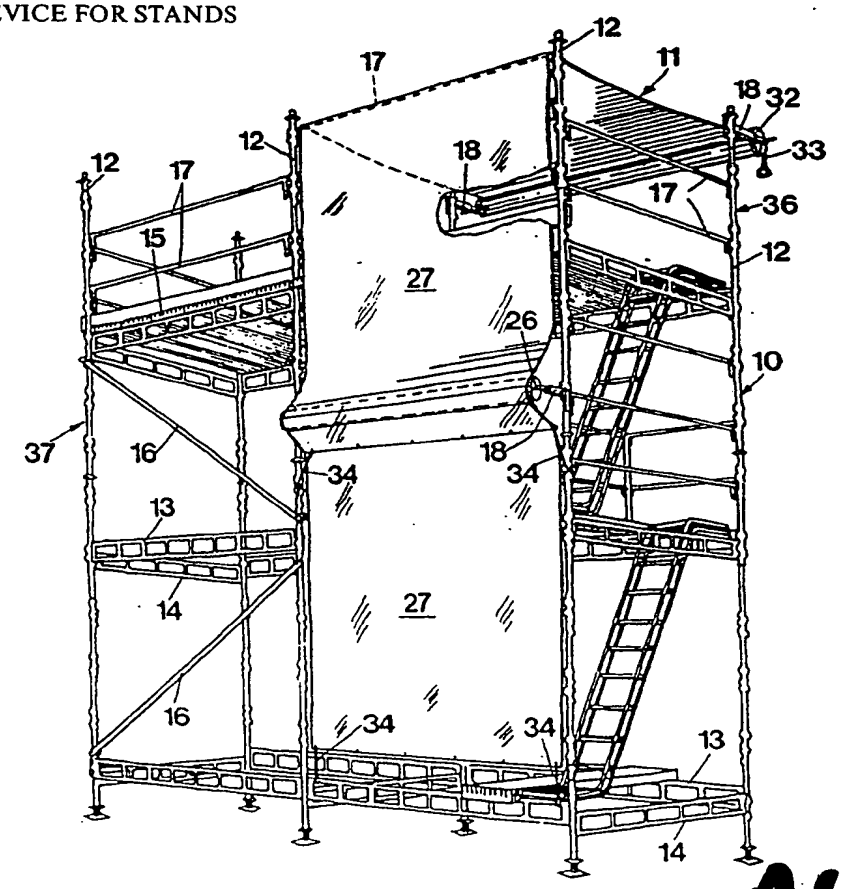
(54) Title: A WEATHER PROTECTING DEVICE FOR STANDS

(57) Abstract

A weather protecting device for stands, particularly scaffoldings. The purpose is to provide a simple and efficient weather protection device, which with a few manipulations can be applied upon a scaffolding, which can be extended gradually with the progress of the building work and which not only provides a protection for the worker upon the stand but also against rain water flowing along the building wall against which the scaffolding is mounted. These objects have been solved in that to the stand, preferably to the vertical poles (12) are connectable brackets (18) each one being provided with at least one supporting member (25) intended to carry at least one end of a roller blind (27) rotatably supported at or around said supporting members (25).



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A WEATHER PROTECTING DEVICE FOR STANDS

The present invention relates to a weather protecting device for stands, especially scaffoldings and including brackets attachable to the stand, preferably to some of the vertical poles thereof, said brackets being provided with at least one supporting member supporting at least one end of a roller blind rotatably arranged around the supporting members.

BACKGROUND OF THE INVENTION

Several outdoor works, particularly in building yards, ship-yards and so on, can be performed only with difficulties or not at all during rain or snowfall. For special works, such as blasting of facades, the entire scaffolding has been covered with tarpaulins to provide a reasonably tight shielding in order to limit the spread of dust. The work required to apply such tarpaulins is very extensive and it can hardly be done at scaffoldings which successively grow during the progress of the work, for example at laying of brick facades, etcetera.

From DE-2217826 it is known to arrange roller blinds between the poles of the scaffoldings, and in order to provide a sealing effect between two adjacent roller blind webs, these webs are made broader than the roller blind rod. When drawing up the roller blind web, this shall be folded in as much as the projecting portion. At blind web lengths, which shall be possible to extend over several floors, i.e. the lengths of 10 - 20 meters, such a folding in at the drawing up is not practicable. This type of weather protecting furthermore neither provides any protection above the scaffolding nor close to the building, where the rain water thus can flow down and destroy current work.

Overlapping tarpaulins or roller blind webs furthermore are difficult to interconnect in a sealing manner along their edges. Even if holes are made along these edges in order to allow the two overlapping edges to be connected by strings, such a tightness as required in some situations, cannot be

provided. The sealing between these edges has to be effective enough also to stand winds of gale force.

OBJECTS AND MOST ESSENTIAL FEATURES OF THE INVENTION

The object of the present invention is to provide a simple and effective weather protecting device, which with simple manipulations easily can be applied upon a scaffolding, which can be extended gradually with the progress of the work and which not only provides a protection for the worker on the scaffolding, but also against rain water flowing along the building, at which the scaffolding is mounted. Another object of the invention is to provide a tight connection between adjacent edges of the roller blind webs, which can stand the effects of the weather. These objects have been solved in that the brackets are arranged to project outside the stand, and in that the roller blind supported by the brackets is displaceable in one plane relative to the stand to engagement against the building.

DESCRIPTION OF THE DRAWINGS

Figure 1 shows in perspective a scaffolding a section of which is provided with a weather protecting device according to the invention.

Figure 2 shows in larger scale a side view of a bracket provided with a roller blind, and forming part of the device.

Figure 3 shows a cross section along line III-III in figure 2.

Figure 4 is a cross section along line IV-IV in figure 3.

Figure 5 shows a side view of a stand, in which the weather protecting device according to the invention is somewhat modified and provided with an additional connecting device.

Figure 6 is a cross section along line VI-VI in figure 5.

Figure 7 is a cross section along line VII-VII in figure 5.

Figure 8 shows the stand for the connecting device from above.

Figure 9 shows the cover plate for the connecting device 9 from above.

Figure 10 shows a further embodiment of the weather protecting device of the invention with a connecting device.

Figure 11 shows the device according to figure 10 from above.

DESCRIPTION OF THE EMBODIMENTS

The weather protecting device - in the drawing indicated 11 - can be applied on every stand 10 available on the market, but in the embodiment shown in the drawing it is adapted for one of the most common scaffoldings 10, where the separate scaffolding components are hooked into each other. As shown in figure 1 such a scaffolding consists of vertical poles 12 connected to each other by longitudinal and transverse bars 13, 14 upon which are laid platforms 15, e.g. wooden gratings. Diagonal bars 16 and horizontal bars 17, which can be used as protecting rails, are furthermore included.

The weather protecting device 11 according to the invention includes two brackets 18, each being attachable to a pole 12. The bracket is for this purpose provided with a connecting device 19, designed as hooks, which are insertable into the supports 20 of the poles. The bracket 18 is fixedly attached to the scaffolding by means of a locking element 21, whereby it cannot be lifted out of the supports, if the locking element has not been pivoted out of engagement with the corresponding support 20.

The free arm 22 of the bracket 18 can be telescopically extended or shortened by means of an inner extension piece displaceably arranged in the arm 22. By means of a splint 24 or the like the extension piece 23 can be locked in different extended positions. At the free end of the extension piece 23, there are arranged double supporting members 25 formed by horizontal shaft journals, which are welded to the extension piece. The shaft journals 25 are arranged to support a roller blind rod 26 on which is wound a roller blind web 27. The roller blind rod 26 thus at both ends is supported on a bracket, and the length of the roller blind rod is adapted to correspond to the standard distance between two poles 12.

In order to prevent the roller blind 27 from being unrolled

accidentally, the bracket 22 is provided with a blocking device 28, by means of which the rotation of the roller blind rod can be blocked. In the embodiment shown the blocking device consists of two shackles 29 attached to a bar 30, which is vertically displaceable through holes in the extension piece 23. The free ends of the shackles 29 can be inserted in any of the holes 31 arranged along the outer periphery of the roller blind rod 26, and close to one end thereof.

The device functions in the following manner

A bracket 18 is hooked into the supports 20 at the upper end of a pole 12, at the side 36 of the scaffolding facing the building 35, whereafter the locking element 21 is brought to locking function. The extension piece 23 is thereby in its most pushed in position. The roller blind rod thereupon is pushed onto one shaft journal 25 of the bracket, whereas the shaft journal 25 of another bracket is pushed into the roller blind rod at the opposite end thereof, whereupon the bracket is hooked into the other pole 12. The roller blind 27 is thereafter pulled over the stand as shown in figure 1, i.e. over two horizontal rods 17 and downwards outside 37 the stand, as far as the roller blind reaches or the shielding is wanted. If the stand is higher than the lenght of the roller blind, several roller blinds are arranged after each other in series, whereby such roller blinds preferably are arranged to overlap each other in the longitudinal direction. The bracket 18 is designed with double shaft journals 25, for one roller blind rod 26 each, for allowing several roller blinds to be hung parallel to each other. The width of the roller blind is mainly equal to the width of a scaffolding module, i.e. the lenght of a longitudinal bar 13 and a transverse bar 14, resp.

The blocking device 28, shown in figure 3, and intended for locking the roller blind rod 26 in relation to the bracket, is designed to lock the roller blind rods 26 on both sides of the bracket 18, but it is also possible to form the blocking device 28 with double clamping means 29, which are independent lockable, in order to allow the pulling down of each roller

blind individually without acting upon the adjacent roller blind.

In order to facilitate the rolling up of the roller blind 27, a roller 32 for a band 33 can be fitted to one end of the roller blind rod 26 outside the roller blind, which band is wound up when the roller blind is pulled down and unwound when the roller blind is rolled up. The rolling up therefore can be easily effected remote from the place where the roller blind is fitted, which place can be out of reach from the stand platform. The free end of the roller blind is fixed to the scaffolding by means of rubber straps 34 or the like.

In some connections it is required that the weather protection surrounds the entire scaffolding in order to provide a closed space between the building and the weather protected scaffolding, where e.g. sand blasting can be performed without contaminating the surroundings. Another example is brick laying or plastering in the winter time, when a freeze-proof atmosphere is provided by hot air inside the weather protection. The tightness between two adjacent, somewhat spaced apart and parallel roller blind webs, is according to the invention provided by a connecting device 40, which includes a tube stand 41 and a covering plate 42, which on the lower side is equipped with a number of attachment devices 43.

The stand 41 is formed as an elongated frame the long sides of which are formed by tubes 44, while the ends 45, which are welded on the tubes, consist of flat bars. Hook-formed connecting means 46 designed to be fitted to the supports 20 of the poles 12 are fixed to said flat bars. The frame-shaped stand 41 encloses a free zone 47, which can have the same width as the free space between the edges 48 of the two adjacent roller blind webs 27. The stand is hooked into the poles 12 at the level of the horizontal rod 17, over which the roller blind web 27 passes, and in such a way that the two edges 48 will be positioned on the upper side of the stand 41. The cover plate 42 is pushed from below through the free zone 47, thus that it will be positioned above the end

portions of both roller blind webs and thereby also above the stand. The cover plate 42 can preferably be provided with recesses 49 corresponding to the outer periphery of the poles 12. The attacment devices 43 on the lower side of the cover plate 42 preferably consist of at least one wing nut, which is pivotally arranged around a screw 50 fixed on the cover plate 42, and which wing nut 43 can be tightened against the lower side of the stand as shown in figure 6. The edges 48 of the roller blind thereby will be clamped along the entire lenght of the stand, whereby an effective arresting of the roller blind web 27 is provided.

After a small modification the stand 41 also can be used vertically as shown in figure 5, for sealing off the joint between the two vertical parts of two adjacent roller blind webs 27 in the same way as in horizontal or inclined position.

In some cases the supports 20 for the poles 12, in the area where the roller blind should be attached to the scaffolding, are occupied by transverse rods or the like, whereby a modified device according to the invention can be used. Such a modified embodiment is shown in figures 10 and 11, and the modification consists in that the connecting device 19 of the bracket 18 is formed to cooperate with the front supports 20 of the poles 12. As the other supports 20 are occupied by the cross beams 13, the support of the connecting device 40 cannot be attached to any of the supports 20, but the connecting means 46 of the support is formed with a clamp meant to grip the upper longitudinal tube of the transverse bar 13. Otherwise the two embodiments shown are identic.

CLAIMS

1. A weather protecting device for stands, especially scaffoldings and including brackets (18) attachable to the stand, preferably to some of the vertical poles (12) thereof, said brackets being provided with at least one supporting member (25) supporting at least one end of a roller blind (27) rotatably arranged around the supporting members (25), characterized in, that the brackets (18) are arranged to project outside the stand and in that the roller blind (27) supported by the brackets is displacable in a plane relative to the stand to engagement against the building (35).

2. A weather protecting device according to claim 1, characterized in, that the web (27) of the roller blind (11) is arranged to extend from the roll positioned outside the inside (36) of the stand, via the horizontal rods (17) at the inner and outer sides of the stand and further along at least a part of the vertical outside (37) of the stand.

3. A weather protecting device according to claim 1 or 2, characterized in, that the free arm (23) of the brackets (18), provided with supporting members (25), is telescopically extendable and lockable in different extended positions.

4. A weather protecting device according to claim 1, 2 or 3, characterized in, that a device (28) for blocking the rotation of the roller blind (27) is provided at the bracket (18).

5. A weather protecting device according to claim 4, characterized in, that at one end of the roller blind rod (26) there is fitted a roller (32) for a band (33) or the like, which band is arranged to be wound up on the roller (32), when the roller blind (27) is pulled down and vice versa.

6. A weather protecting device according to anyone of the preceeding claims,
characterized in,
that the bracket (18) is provided with a connecting device (19) for detachable attachment to the stand.

7. A weather protecting device according to anyone of the preceeding claims,
characterized in,
that the connecting devices (19) of the bracket (18) are designed as hooks for hooking in the supports (20) of the stand.

8. A weather protecting device having several roller blinds according to one or more of the preceeding claims, arranged between the poles of the stand,
characterized in,
that a connecting device (40), supported by the stand (10), is arranged in the joint between two roller blind webs (27), by means of which the edge parts (48) of adjacent roller blind webs (27) are interconnectable and that the connecting device (40) is designed to cover the joint between said edge parts (48).

9. A weather protecting device according to claim 8,
characterized in,
that the connecting device (40) is formed by a frame-shaped stand (41), which spans the distance between the front and back sides (36, 37) of the stand, the stand being provided with a free zone arranged between the frame sides, through which zone a plate (42) and the stand (41) can be pushed, and the edge parts (48) of the roller blind webs (41) being arrestable between the plate (42) and the stand (41).

FIG 1

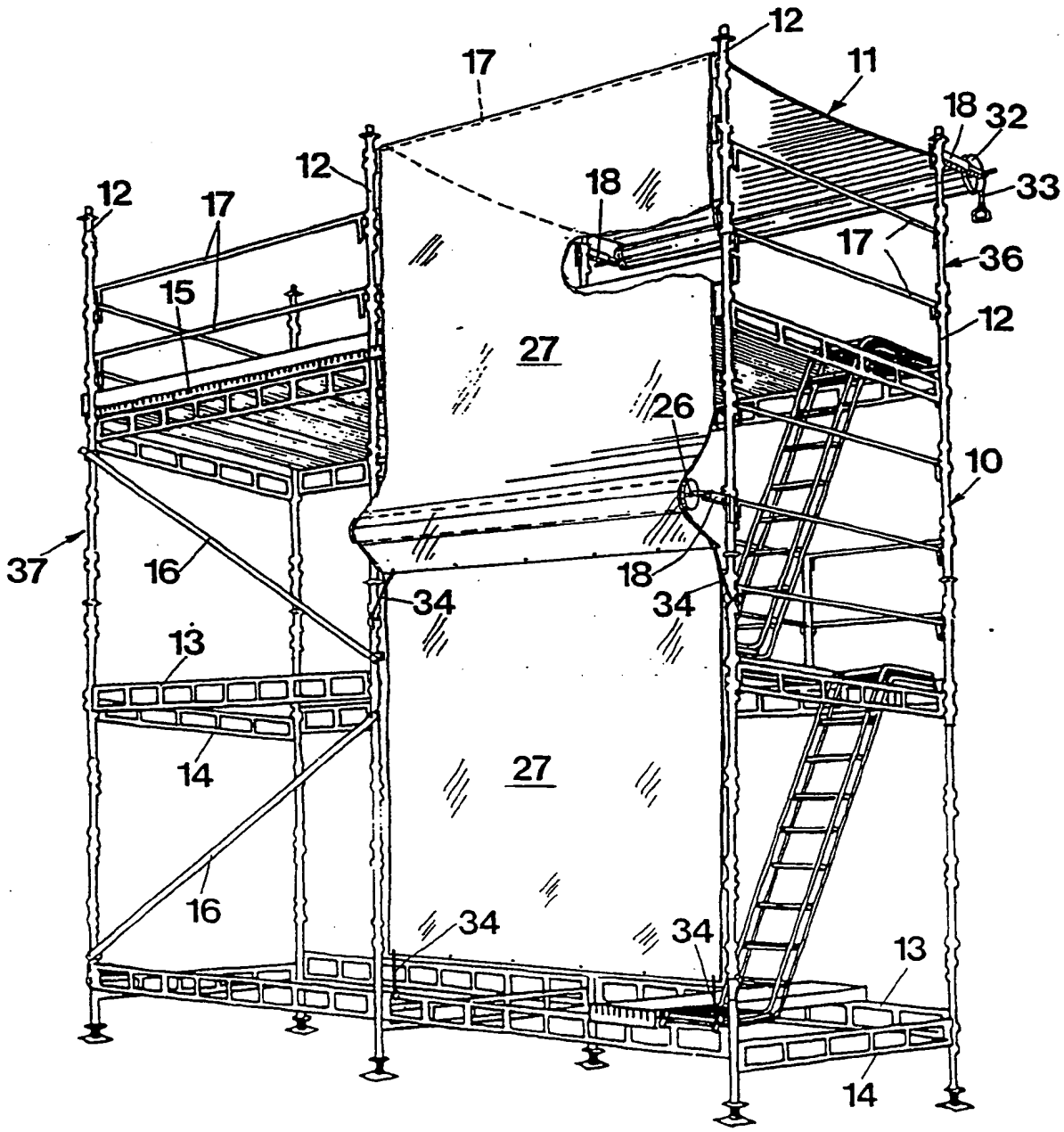


FIG 2

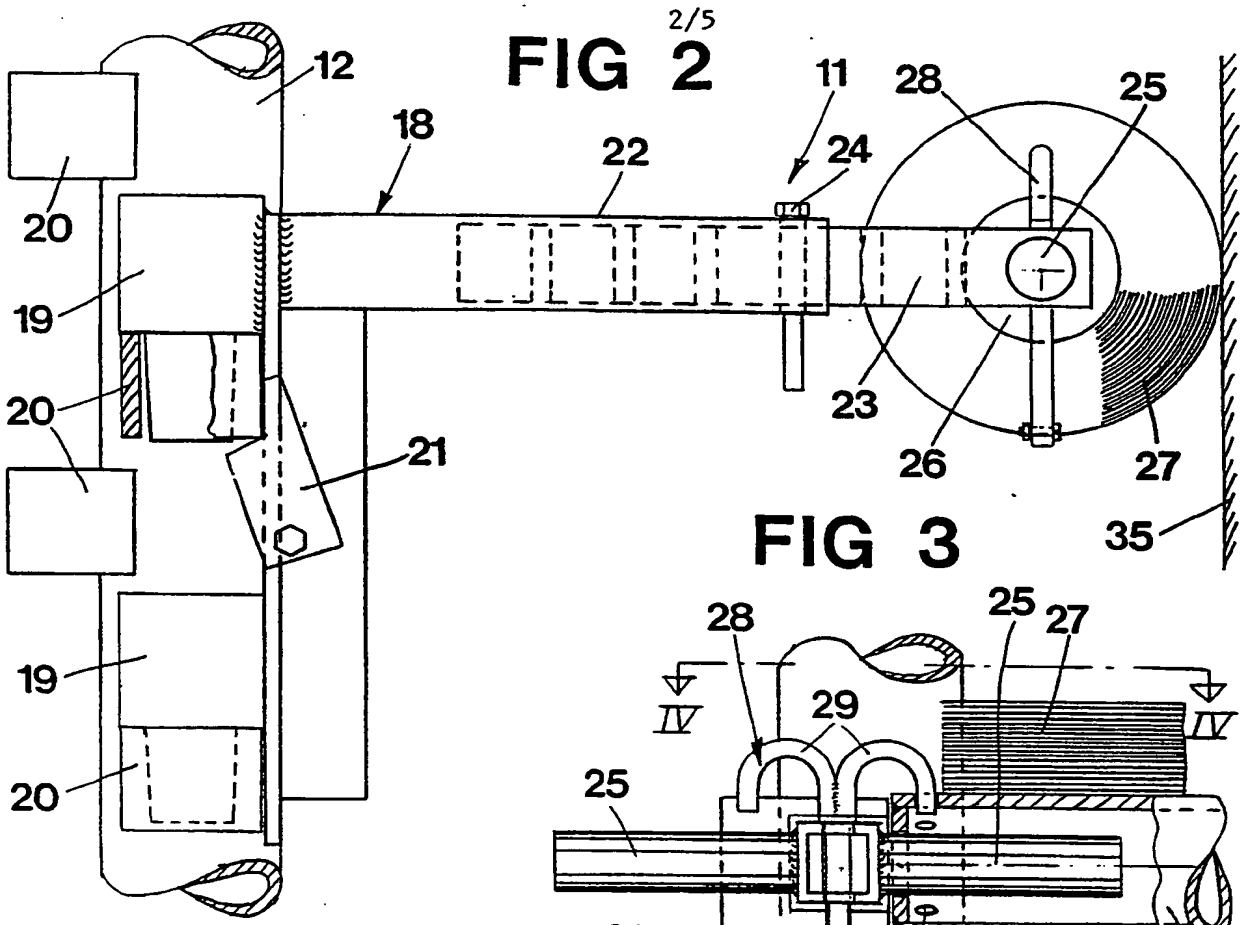


FIG 3

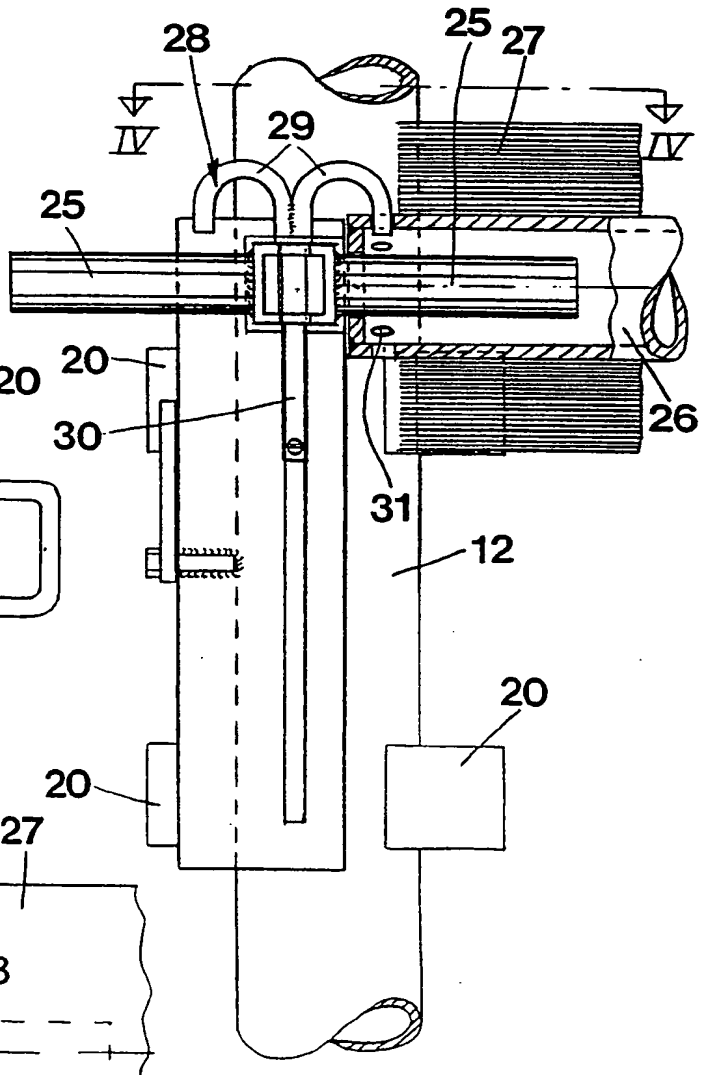
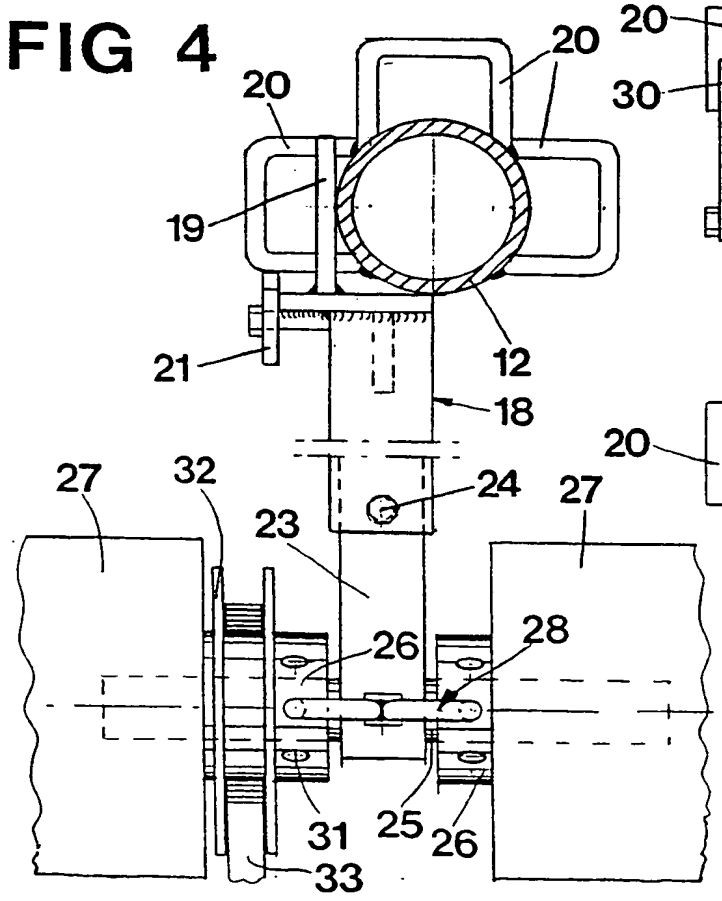


FIG 4



SUBSTITUTE SHEET

FIG 5

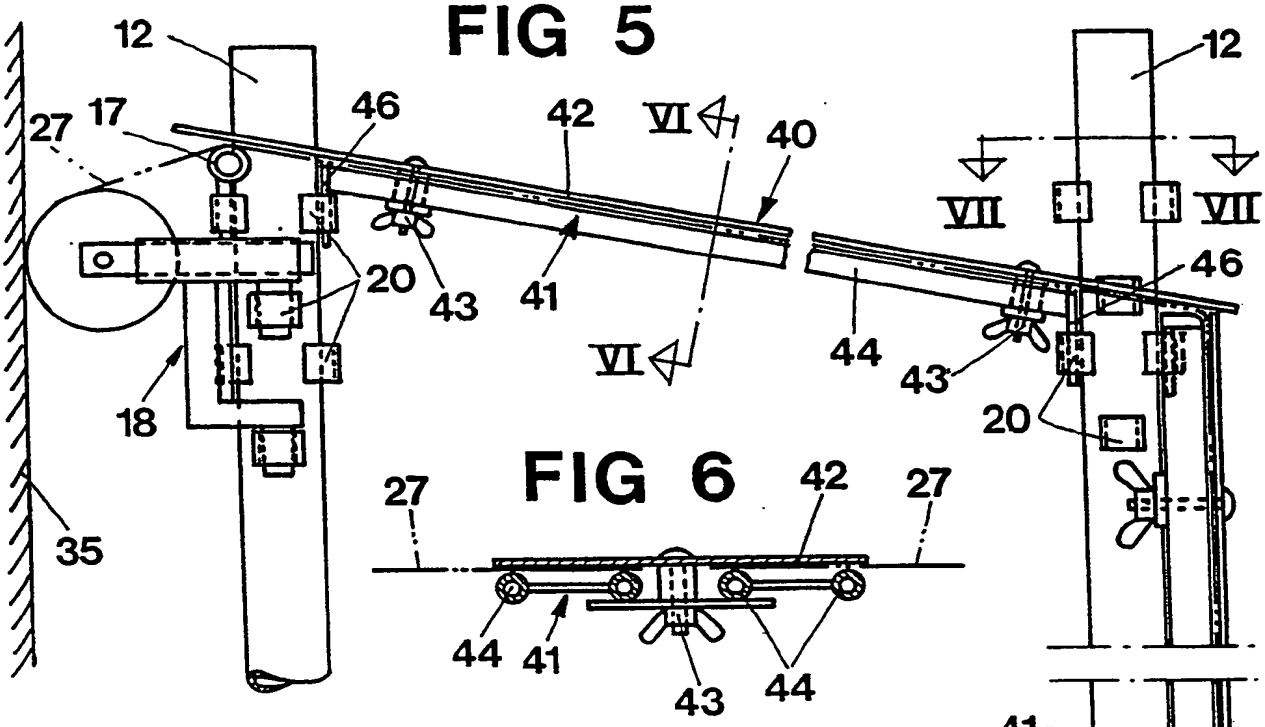
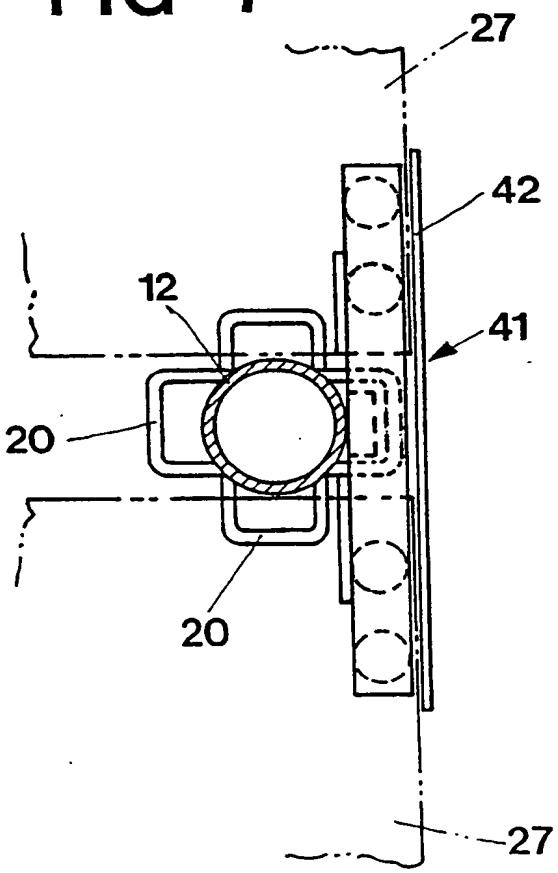


FIG 6

FIG 7



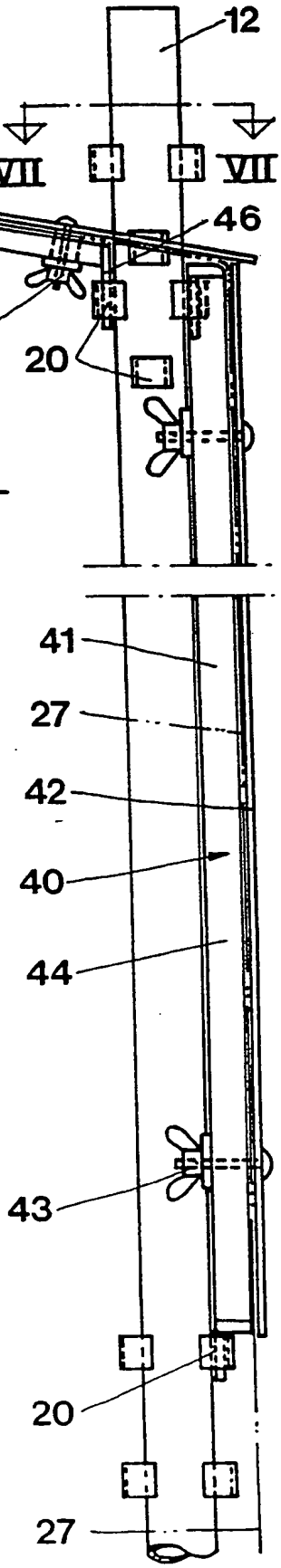


FIG 8

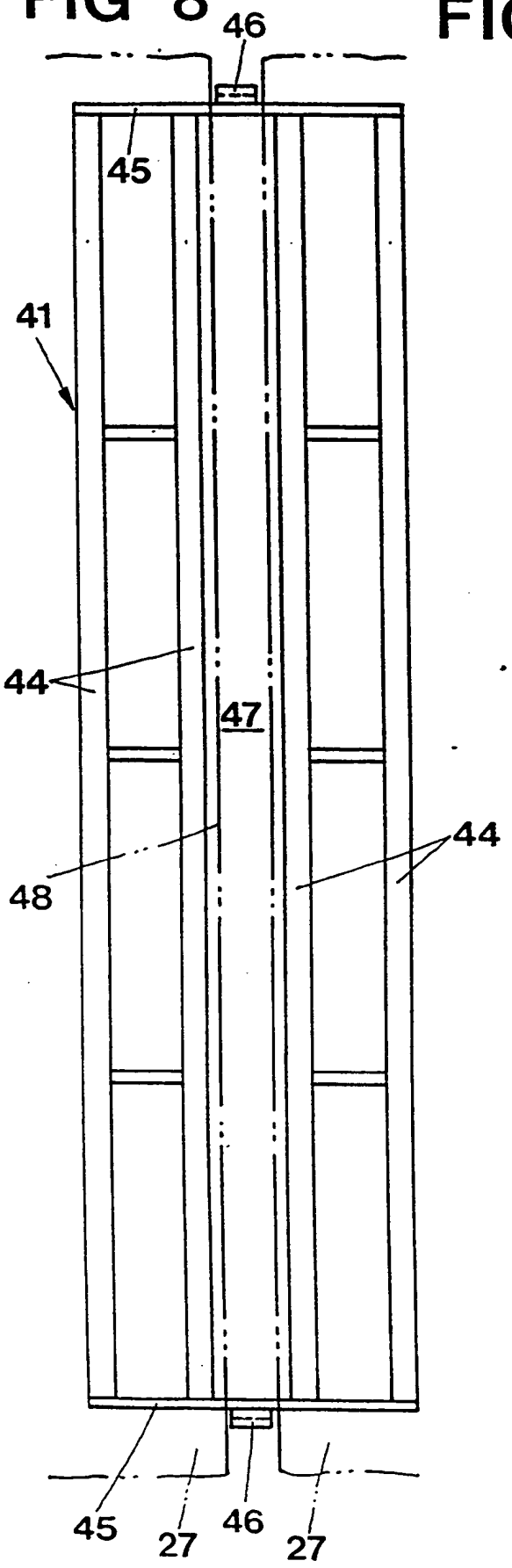


FIG 9

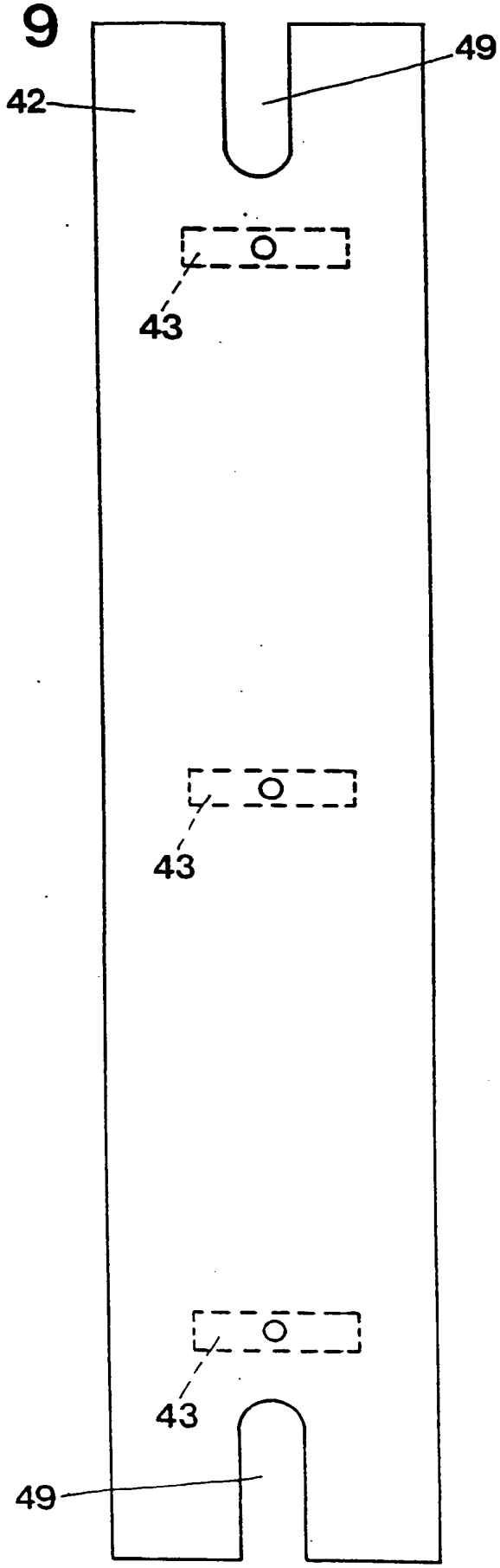


FIG 10

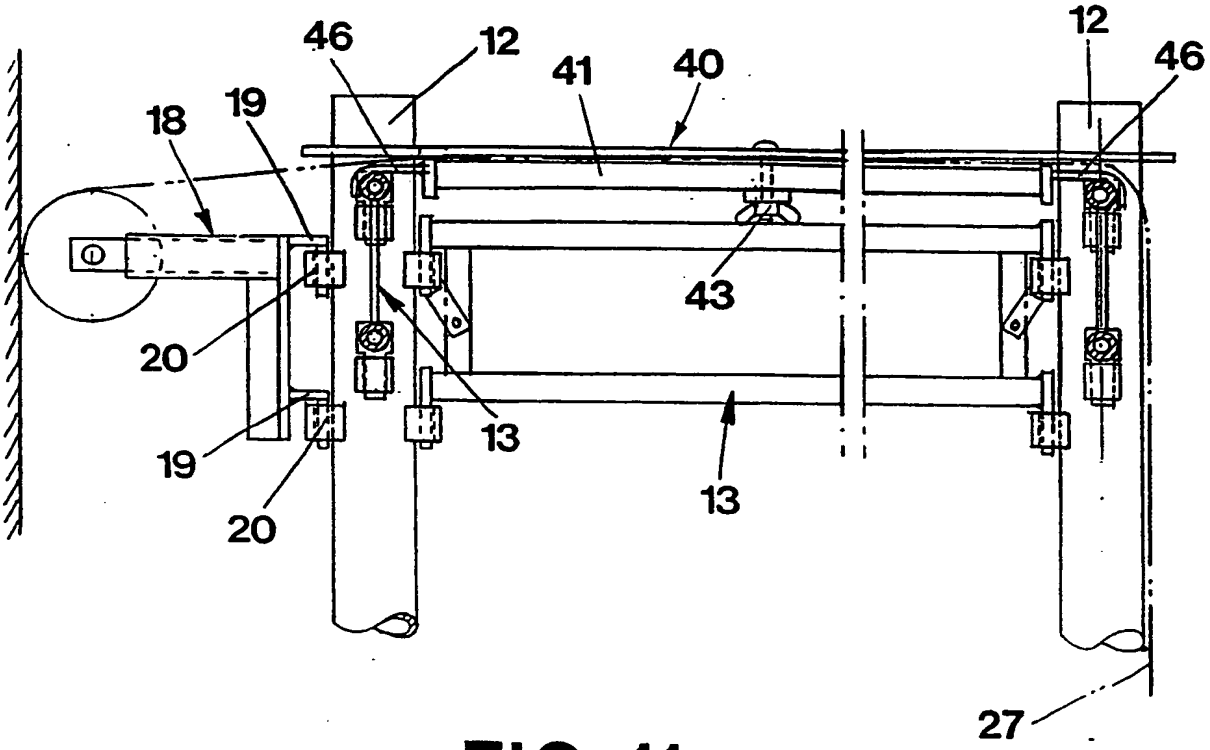
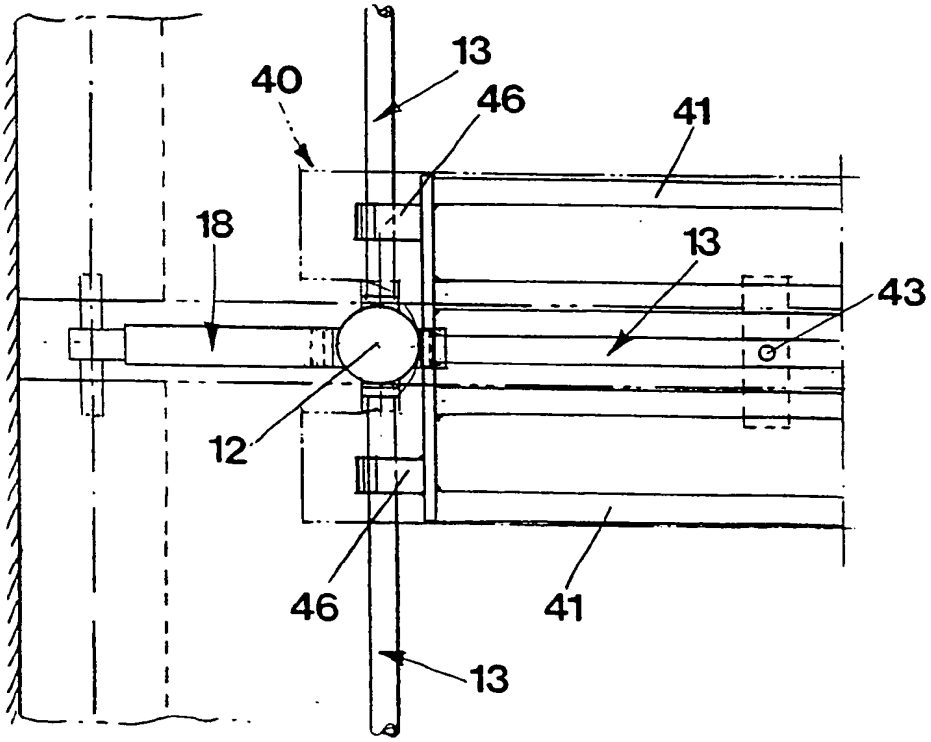


FIG 11



INTERNATIONAL SEARCH REPORT

International Application No PCT/SE85/00506

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [6]

According to International Patent Classification (IPC) or to both National Classification and IPC 4

E 04 G 1/26, 21/28

II. FIELDS SEARCHED

Minimum Documentation Searched [7]

Classification System	Classification Symbols
IPC 4	E 04 G 1/00, /26, 5/00, 21/24, /28-/32; E 06 B 9/208
US Cl	52: 1, 3-5, 63; 160: 44-47; 182: 230

Documentation Searched other than Minimum Documentation to the Extent that such Documents are included in the Fields Searched [8]

SE, NO, DK, FI classes as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT [9]

Category [10]	Citation of Document, [11] with indication, where appropriate, of the relevant passages [12]	Relevant to Claim No. [13]
Y	DE, A1, 2 217 826 (KUSTO GMBH, KUNSTSTOFF VERARBEITUNG) 25 October 1973	1-4, 6-8
Y	DE, A1, 2 637 298 (SONNAUER, RUPERT) 23 February 1978	1-4, 6-8
A	FR, A5, 1 196 679 (TINCA, JEAN) 25 November 1959	
A	DE, C, 812 605 (KNECHT, KARL) 3 September 1951 see page 2, line 101-108	5
A	DE, C, 93 259 (OTTSTADT, KARL W) 17 January 1896	4-5
A	SE, A, 212 103 (STRÖMBERG S F) 11 April 1967	
A	US, A, 3 807 481 (HEIDER KARL ADAM) 30 April 1974	
A	DE, A1, 2 340 642 (FEINPROFIL-KALTWALZWERK ALSDORF + FISCHER) 20 February 1975	

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IV. CERTIFICATION

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International Searching Authority	**Signature of Authorized Officer**
Swedish Patent Office	Tommy Blomberg

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